AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES MADE, AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS

1. (Currently amended) A method for enhancing the control response of at least one drive train of a machine tool or production machine, wherein the at least one drive train includes a motor and a load coupled to the motor with backlash and/or elasticity, comprising the steps of:

measuring a motor speed on the motor;

weighting the measured motor speed by multiplication with a parameter (α), wherein α has a value between zero and one;

measuring a load speed proximate to the load;

weighting the measured load speed by multiplication with a parameter ($1-\alpha$);

computing a combined signal comprising a weighted measured motor speed and a weighted measured load speed; and

controlling the motor speed with the combined signal.

2. (Canceled)

3. (Canceled)

4. (Original) The method of claim 1, wherein controlling the motor speed includes regulating a difference between the combined signal and a desired speed value to zero.

5. (Currently amended) A method for enhancing the control response of at least one drive train of a machine tool or production machine, wherein the at least one drive train includes a motor and a load coupled to the motor with backlash and/or elasticity, comprising the steps of:

measuring a motor speed on the motor;

measuring a load speed proximate to the load;

computing a weighted difference between the measured motor speed and the measured load speed by multiplying an actual difference between the measured motor speed and the measured load speed measured motor speed by a parameter (α), wherein the parameter α has a value between zero and one;

adding the measured load speed to the weighted difference to form a combined signal; and

controlling the motor speed with the combined signal.

6. (Canceled)

7. (Canceled)

8. (Original) The method of claim 5, wherein controlling the motor speed includes regulating a difference between the combined signal and a desired speed value to zero.

9. (New) The method of claim 1, wherein controlling the motor speed with the combined signal increases a torque cancellation frequency by a factor $1/\sqrt{\alpha}$ over a control operating solely based on the motor rotation speed.

10. (New) The method of claim 5, wherein controlling the motor speed with the combined signal increases a torque cancellation frequency by a factor $1/\sqrt{\alpha}$ over a control operating solely based on the motor rotation speed.